

## INTERLACED ALTERNATING PIXEL DESIGN FOR HIGH SENSITIVITY CMOS IMAGE SENSORS

### ABSTRACT

A structure of an image sensor for sensing the light of an image impinging thereupon and for translating the image into a standard television format is disclosed. The structure comprises a plurality of first and second light detecting elements (22, 23) arranged in rows and columns and half as many rows and columns as scan lines of a television format for generating respective analog signals in proportion to the intensity of the light impinging respectively on each of the first and second light detecting elements (22, 23), wherein the first and second light detecting elements in each row are alternately disposed and activated by first read lines RDO<sub>n</sub> ( $n = 1 \dots 256$ ) to generate odd field signals, and wherein the first and second light detecting elements (22, 23) of two adjacent rows disposed in a zigzag or serrated manner are activated by second read lines RDE<sub>n</sub> ( $n = 1 \dots 256$ ) to generate even field signals.

(Fig. 2A)